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A MULTICHIP TYPE SEMICONDUCTOR DEVICE

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[There are no amendments to this patent.]

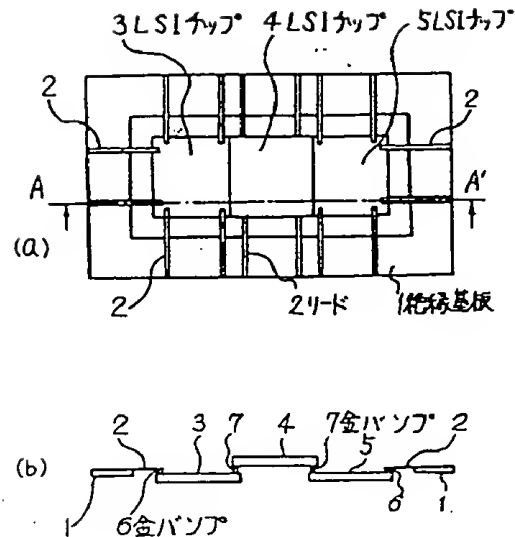
Abstract

Constitution

Metallic bumps (6) of LSI chips (3) and (5) are connected to leads (2) from the side of the lower face of a circuit substrate, which has leads (2) that are provided at the upper face of an insulating substrate (1), and directly connected and installed on the LSI chips (3) and (5) through metallic bumps (7) of an LSI chip (4) from the side of the upper face.

Effect

The inductance and the parasitic capacitance of the leads are reduced, and the high-frequency characteristic is improved.



- Key:
- | | |
|---|----------------------|
| 1 | Insulating substrate |
| 2 | Lead |
| 3 | LSI chip |
| 4 | LSI chip |
| 5 | LSI chip |
| 6 | Metallic bump |
| 7 | Metallic bump |

Claims

1. A multichip-type semiconductor device characterized by having: a circuit substrate, which has leads that are arranged over an insulating substrate; a primary LSI chip, which is connected to the aforementioned leads from the side of the lower face of the aforementioned circuit substrate and installed; and a secondary LSI chip, which is connected to the aforementioned

leads from the side of the upper face of the aforementioned circuit substrate, and is also directly connected and installed through the aforementioned primary LSI chip and bumps.

2. The multichip-type semiconductor device in Claim 1, in which the LSI chip is in a cross shape in which 4 corners are cut off.

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